

**Listing of Claims:**

Claim 1 (Canceled).

2. (Previously Presented) A magnetic sensor comprising:

first and second fixed resistors, each of which has a first end connected with a first side of an output line of a DC power source;

5        a first magnetic detecting element which has a first end connected with a second side of the output line of the DC power source, and a second end connected with a second end of said first fixed resistor to function as a sensing portion adapted to face a magnetic detecting medium having a magnetic substance  
10        printed thereon;

      a second magnetic detecting element which has a first end connected with the second side of the output line of the DC power source, and a second end connected with a second end of said second fixed resistor to function as a temperature-compensating  
15        portion that is not affected by the magnetic substance printed on said magnetic detecting medium;

      a magnet that gives magnetic biases to said first and second magnetic detecting elements; and

      a detection circuit that detects a potential change between  
20        a connection point of said first fixed resistor and said first

magnetic detecting element and a connection point of said second fixed resistor and said second magnetic detecting element;

wherein said detection circuit comprises a single differential amplifier, and detects a concentration of the magnetic substance printed on the magnetic detecting medium based on the detected potential change.

25